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AUTHOR Schludermann, Eduard; Schludermann, Shirin; Huynh, Cam-Loi
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ABSTRACT

This study explored the facilitating function of religion in the lives of adolescents, postulating that religiously involved students would endorse prosocial-- rather than egoistical--values, and that their prosocial values would foster a sense of belongingness to their church, family, and school. Participating were 369 boys and 372 girls attending 3 Catholic high schools in Winnipeg, Canada. Subjects completed questionnaires assessing family religion, religiosity, prosocial values, school attitudes, family satisfaction, self-esteem, and life satisfaction. Findings indicated no sex differences in family religion, religiosity, school attitudes, family satisfaction, self- esteem, or life satisfaction. However, girls endorsed prosocial value much more than did boys. Religiosity was strongly related to prosocial values, good school attitudes, and family satisfaction. Compared to girls' religiosity, boys' religiosity was more predictive of the endorsement of prosocial values, good school attitudes, family satisfaction, self-esteem, and life satisfaction. Structure equation analyses strongly supported a social facilitation model of the role of religiosity in the lives of adolescents: religiosity fostered the endorsement of prosocial values, prosocial values enhanced social adjustment (school attitudes, family satisfaction), and good social adjustment contributed to good personal adjustment (self-esteem and life satisfaction). (Contains 29 references.) (KB)

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CATHOLIC SCHOOLS STUDY REPORT: RELIGIOSITY, VALUES AND ADJUSTMENT

Eduard Schludermann, Shirin Schludermann, Cam-Loi Huynh,
Department of Psychology, University of Manitoba, Winnipeg, MB,
Canada, R3T 2N2. Phone (204) 474-9617.

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TABLE OF CONTENTS

ABSTRACT III

1. BACKGROUND INFORMATION OF THE STUDY 1
   1.1. Religiosity: Good or Bad Effects 1
   1.2. Religion and Education 3
   1.3. The Study of Values 6
   1.4. Adolescent Development 9

2. THE RESEARCH STRATEGY 11
   2.1. The Overall Design 11
   2.2. The Sample 12
   2.3. The Statistical Indices and Procedures 13
   2.4. The Selection and Refining of Measures 16
   2.5. The Measures of Religiosity 17
   2.6. The Measures of Prosocial Values 18
   2.7. The Measures of Social Adjustment 19
   2.8. The Measures of Personal Adjustment 20

3. THE RESULTS 20
   3.1. Means: Total Sample 20
   3.2. Means: Gender 23
   3.3. Personal Relations Values: Gender 25
   3.4. Religiosity and Values: Gender 26
   3.4. Correlations: Total Sample 28
   3.6. Correlations: Gender 30
   3.7. Structural-Equations Modelling 32
   3.8. Summary of the Results 35

4. THE IMPLICATIONS FOR THE RELIGIOUS EDUCATOR 36
   4.1. Effects of Religious Commitment 36
   4.2. Religious Education 37
   4.3. Transmitting Prosocial Values 38
   4.4. Enhancing Social and Personal Adjustment 39

REFERENCES 41

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ABSTRACT

In contrast to studies which have emphasized the controlling function of religion in the lives of adolescents, the present study explored its facilitating function. It is postulated that adolescents who are religiously involved would endorse prosocial, rather than egoistical values. Their prosocial values would foster a sense of belongingness to their church, family and school. A total of 369 boys and 372 girls attending 3 Catholic high schools in Winnipeg completed questionnaires assessing family religion, religiosity, prosocial values, school attitudes, family satisfaction, self esteem, and life satisfaction. There were no significant gender differences in family religion, religiosity, school attitudes, family satisfaction, self esteem and life satisfaction. However, girls endorsed prosocial values much more than did boys. The study found that religiosity was strongly correlated to prosocial values, good school attitudes, and family satisfaction. Compared to girls' religiosity, boys' religiosity was more predictive of the endorsement of prosocial values, good school attitudes, family satisfaction, self esteem and life satisfaction. Structural-Equation analyses (LISREL) strongly supported a social facilitation model of the role of religiosity in the lives of adolescents: religiosity fostered the endorsement of prosocial values, prosocial values enhanced social adjustment (school attitudes, family satisfaction) and good social adjustment contributed to good personal adjustment (self esteem, life satisfaction).

1. BACKGROUND INFORMATION OF THE STUDY

1.1. Religiosity: Good or Bad Effects

It was one of the goals of the present study to clarify the relation between religious commitment and personal and social adjustment. Churches have established religious schools on premise that the Christian religion is not only true, but also beneficial to the individual and to society. When churches argue for government support of religious schools, they argue that the transmission of the Christian religion benefits not only churches, but also the children attending the religious schools and the society in general. Unfortunately, such an argument is often rejected by public-schools educators, social scientists and psychologists. There is a wide spectrum of opinion as to whether religious commitment promotes or hinders good personal and social adjustment. It is not the purpose of this report to make an exhaustive review of the relevant research literature, or to provide an in-depth theoretical analysis. This section merely highlights the most important alternative viewpoints on this issue.

Some psychologists have argued that religious commitment (especially historical Christianity, such as, mainstream Catholicism, or Evangelical Protestantism) tends to be associated to poor mental health and poor social adjustment (e.g., Wulff, 1991, p. 309). The social psychologist Dittes (1969, pp. 637-641) reviewed the relevant research literature and concluded that, compared to nonreligious persons, religious persons are characterized by **personal inadequacy**. He argued that "The psychological research reflects an overwhelming consensus that religion (at least as measured in the research, usually institutional affiliation or adherence to conservative traditional doctrines) is associated with awareness of personal inadequacies, either generally or in response to particular crisis or threat situations; with objective evidence of inadequacy, such as low intelligence; with a strong responsiveness to the suggestions of other persons or other external influences; and with an array of what may be called desperate and generally unadaptive defensive maneuvers" (p. 636). Such a relation could either mean that a strong religious faith produces such inadequacies, or that persons with inadequacies tend to be attracted to the comforts of religion. Even though Dittes' conclusion was based on evidence which is more-than-25-years old, it was quoted and taken very seriously in recent surveys of the psychology of religion (e.g., Batson, Schoenrade, & Ventis, 1993, p. 234; Wulff, 1991, p.309).

Other social scientist have argued that, compared to nonreligious persons, religious persons endorse **harmful social values**. The eminent social psychologist Rokeach (1969), concluded on the basis of his studies that compared with

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nonreligious persons, (1) that religious persons are more deficient in social compassion and concern for the socially disadvantaged and (2) that they are also more bigoted toward minority groups. He felt strongly that religion, especially the Christian religion, has harmful effects on society. The discussants of Rokeach's address accepted his data on the relation between religiosity and harmful social attitudes, but (unsuccessfully) tried to arrive at alternative interpretations of the data. The social psychologist, Altemeyer (1988) argued that persons committed to traditional Christianity endorse bigoted and authoritarian attitudes. He said that: "The findings are really rather simple. Authoritarians in my samples [University of Manitoba students] tend to be religious, and vice versa. High RWAs [Right-Wing Authoritarians] usually have tightly wound religious ideologies. They appear to be under appreciable pressure to believe truly, and to keep doubts to themselves, split off and tuck away" (p. 230). Altemeyer's conclusions about the link between Christian commitment and authoritarianism have been widely accepted and frequently quoted (e.g. Wulff, 1991, pp. 225-226).

A variant of the above two views is the distinction between **"bad" and "good" religiosity** (e.g., Wulff, 1991, pp. 630-636). According to such a view, "bad" religiosity takes the supernatural events recorded in the Bible (e.g., resurrection of Christ) literally and is organized into churches which transmit traditional dogmas and prescribe moral codes. Mainstream Catholics and Evangelical Protestants are the typical examples. Such bad religiosity is supposed to harm cognitive and personal development. In contrast, "good" religiosity takes supernatural concepts as symbolic, endorses unconventionality and tolerance of ambiguity, has a humanistic concern for others, and promotes an individual spiritual quest. Canadians who endorse "spirituality" (e.g., New Age), but reject organized religion are typical examples. Such "good" religiosity is supposed to promote creativity and personal growth.

In contrast to the above views, some researchers on adolescent development have tended to see religious involvement in a more positive light. Benson's (1990, pp. 9, 11) national survey of U.S. adolescents saw religious involvement (along with family support, parental monitoring, positive peer influences, positive school climate, etc.) as an **"asset"** which protects adolescents from problem behaviors (e.g., smoking, drinking, drug use, sexual activity, school absenteeism, reckless driving, and theft). Bibby and Posterski (1992, pp. 247-271) observed that, compared with the unchurched, religiously active Canadian adolescents and adults endorsed much more **prosocial values**, such as honesty, forgiveness and generosity. They noted that churches systematically teach such values.

Thomas and Carver (1990) "call[ed] attention to the two

important functions that religion performs: namely, being both a supportive and motivating force and a controlling and guiding force" (p.196). They noted that most research on adolescents has focused on **social-control** theory which sees religious involvement as inversely related to antisocial behavior (p. 202). They concluded from a literature review that " a clear and consistent relationship emerges in the literature: The higher the involvement in the religious sphere, the lower the frequency, intensity, or duration of these various forms of antisocial behavior" (p. 198). The authors then designed a study to examine the much-neglected **social-facilitation** function of religion. They concluded that the results of their study indicated that religious involvement tended to promote the endorsement of meaningful values along with realistic goals for the future, thus enhancing the adolescent's ability to reach his or her potential and to become socially competent (pp. 212, 215).

Comment: The above brief survey illustrates the fact that there is no consensus as to whether commitment to the Christian religion is or is not beneficial to the individual or to society. The issue is an important one for Christian educators who strive to promote the well being of young people. However, this issue should not be regarded as a matter of biased (pro- or antireligious) opinion, but the issue is basically an empirical one. When we use adequate measures of religiosity and of prosocial values, do more-religious persons endorse prosocial values more; do they endorse prosocial values less, or is there no significant relationship between religiosity and the endorsement of prosocial values? Does the endorsement of prosocial values help adolescents to become more socially competent? It was one of the aims to the present study to clarify these issues. **This study** was designed to examine specifically the social-facilitation function of religion, by relating measures of religiosity, of prosocial values, of social adjustment and of personal adjustment to each other.

1.2. Religion and Education

Most of the research on Catholic schools has focused on their **academic** function. Bryk, Lee, and Holland, (1993) provided strong evidence that Catholic schools in the United States have been very successful in carrying out their academic mission. Even though Catholic schools have fewer economic resources, compared to public-school adolescents, Catholic-schools adolescents were characterized by a greater commitment to education and by better academic performance. Critics of religious schools have been forced to abandon their earlier argument that religious schools should be discouraged, because religious schools provide poorer schooling than do public schools. Critics of religious schools now concede that Catholic schools provide good education, put argue that comparing Catholic

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and public schools is unfair, because students in Catholic schools tend to be socially more advantaged. The finding that Catholic schools tend to be very successful with disadvantaged inner-city minority adolescents (e.g., Bryk et al. pp. 57, 254-255, 273) goes against such an argument.

There has been little research on the **nonacademic** effects of Catholic schooling. One line of research involves comparing the attitudes of Catholic **adults** with a Catholic-school and a public-school back ground (e.g., Greeley, 1989). In such national surveys, Catholic-schools Catholics typically (1) supported equality of women more; (2) were more satisfied with their lives; (3) took a more benign view of their fellow humans; (4) had a more benign view of God; (5) were more generous to the church; (6) had a greater awareness of the complexity of moral decision making. These attitude differences could not be attributed to differences in social background between Catholic-schools and public-schools Catholics.

Even though religious schools have been established for the explicit purpose of transmitting religious beliefs, practices, attitudes and values to the young (e.g., church documents cited by Denys, 1972, p. 160) there have been only a few studies examining the **religious commitment** of students in Catholic schools. Denys (1972) tried to examine the possibility as to whether Catholic schools foster stronger religious commitment than do public schools. He compared Catholic high-school students attending Catholic and public schools in Ontario. He found that the fathers and best friends of Catholic-school students were more religious than those of public-school students. After statistical control for parents' and peers' religiosity, Denys (p. 158) found that Catholic education made a very small independent (i.e., beyond the influence of parents and peers) contribution to Catholic commitment.

There have been very few studies comparing the **attitudes of Catholic adolescents** in Catholic and in public schools. The major study in this area by Guerra, Donahue and Benson (1990) found that, compared to public-schools Catholics, Catholic-schools Catholics (1) rated religion as being more important, (2) had more-positive attitudes about education, human relationships (e.g. family) and concern for others, (3) and engaged less in some at-risk behaviors (e.g., smoking and drug use). The authors pointed out that Catholic schools are within a broader "**functional community**". They stated that: "A functional community is a community of people who share a world-view and seek to pass this world-view on to the next generation...In a functional community, schools are designed to help families socialize their children in this world view. Catholic schools are part of such a community in a way public schools are not" (p.10).

Kraybill (1978, pp. 11-14) has pointed out that it is

virtually **impossible to prove** conclusively (i.e., to the exclusion of all possible alternative explanations) that the characteristics of religious-schools students represent the effects of the schools on their students. There are always other social influences which influence religious-schools students. For instance, parents usually select a religious school for their adolescents, because the school's values agree with the parents' values. In addition, religious-private schools also enable religious adolescents to have many peers with similar beliefs and values. It is, therefore, very difficult to disentangle the relative impact of parents, of friends, and of schools on the adolescents' belief and value formation.

There is a strong social movement which attempts to **separate religion from education**. It is easy to find examples: (1) Québec and Newfoundland plan to remove Catholic schools from church control. (2) Recently, civil-rights groups in the United States have started a campaign to eliminate optional Biblical-history and Bible-as-literature courses from the public-school curriculum. (3) In American public schools, social-science text books almost never mention religious events when they discuss the 19th and 20th centuries (e.g., Vitz, 1985). (4) There is a strong campaign in Canada and the United States to ban all voluntary religious clubs from meeting on public-school property. Many politicians, educationists, and legal scholars believe that educations is enhanced, if it is separated from religious control and influences. Just like Catholic colleges, Catholic schools are under public pressure to emphasize their academic mission, but to deemphasize their religious mission. There is a strong sentiment that abandoning orthodox Christianity leads to intellectual maturity. One constantly runs into autobiographical accounts of how intellectuals "liberated" themselves from their strict Catholic upbringing.

The movement to separate religion and education has its intellectual basis in a philosophy of education which regards the transmission of a religious faith by religious schools as being inherently unethical. Thiessen (1993) points out that, according to this philosophy, socializing adolescents in a religious faith (and in values) involves **indoctrination**, which harms adolescents by depriving them of their autonomy and their rationality (e.g., p. 17). He then points out that this concern with indoctrination has its historical roots in the Enlightenment model of liberal education (pp. 33-52). Thiessen also emphasized that the indoctrination issue has been one of the main arguments (along with the increasing religious pluralism) used by educational reformers in their campaign to eliminate all religious influences from Canadian schools (e.g., 10-18). Thiessen's in-depth analysis of the indoctrination issue, indicated that the concept of "indoctrination" is poorly defined and inconsistently applied. In spite of some weaknesses pointed out by Thiessen, many educators strongly accept the

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indoctrination argument. Because the indoctrination issue will not go away, it is important for spokespersons of Catholic schools to make themselves thoroughly familiar with the arguments on both sides of the indoctrination issue.

Comment: The goal of the **present study** is to explore the role of religious commitment in the development of adolescents, rather than to examine the effects of religious schooling. Even though these two issues are distinct, they are somewhat related. Catholic adolescents in Catholic schools are exposed to a much-more-systematic instruction in the Catholic religion and related values than are the Catholic adolescents in public schools who learn about their religion in a more haphazard way (e.g., occasional mass attendance). One would therefore expect that, compared to public-school adolescents, adolescents in religious schools would have clearer and more consistent ideas about the implications of their religion in different areas of life. One can therefore expect that religious commitment is more predictive in the lives of religious-schools students than in the lives of public-schools students. Moreover, according to recent surveys (e.g., Bibby, and Posterski, 1992, pp. 50-55), most public-school adolescents have a low religious commitment; there are relatively few adolescents with a high commitment. Research which uses such public-school samples to study the relation of religious commitment to other variables can be expected to run into "floor effects", where the correlations between religiosity and other variables are depressed, and where the role of religiosity in adolescent development is obscured. In religious schools, the religious commitment of students typically ranges from very low to very high, with most students in the moderate range. The effects of religious commitment are easier to observe in samples which have a balanced representation of different levels of religious commitment.

Catholic schools have not only an academic, but also a **religious mission**. The Catholic community makes great sacrifices (school fees, fund raising, volunteer time) in organizing and supporting Catholic schools. Is there solid evidence about the benefits of religious commitment, to convince the Catholic community (church leadership, congregations, parents, etc.) that it is worthwhile to make the sacrifices for Catholic schools which foster religious commitment? Should Catholic high schools (like many Catholic colleges) phase out their religious mission and concentrate all their efforts on their academic mission? What would be lost, if the religious mission were abandoned? It is hoped that the present study will contribute to the clarification of these issues.

1.3. The Study of Values

Spates' (1983) historical survey of social-science studies of values documented the fact that many social scientists (e.g.,

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Kluckhohn, Parsons) have regarded **values** as being very important determinants of human behavior. He also pointed out that Rokeach's work on values has constituted an important theoretical and methodological advance in overcoming the limitations of previous studies of values. Rokeach (1973, p. 11) defines a "value" as an enduring belief that a specific goal ("end state of existence") or a specific mode of behavior is preferable to its opposite. "**Terminal**" values (e.g., friendship, success) refer to preferred goals, while "**instrumental**" values (e.g., honesty, intelligence) refer to preferred modes of behavior for reaching these goals. Instrumental values may be classified into competence values and moral values. The violation of "**competence**" values (e.g., intelligence, imagination) leads to shame about incompetence, while the violation of "**moral**" values (e.g., honesty, reliability) leads to guilt about wrong doing. When persons seek to achieve terminal values, they must make choices regarding instrumental values.

The number of a person's "basic" values is limited by his/her basic needs and by societal demands. Rokeach has listed a set of 18 "basic" terminal and 18 "basic" instrumental values which are applicable to a wide range of human populations. A "**value system**" is an enduring rank order of values along a continuum of relative importance (priorities, hierarchy). Rokeach noted that religious and nonreligious persons have different value systems: religious persons endorse moral values more, while nonreligious persons endorse competence values more. Rokeach (1973, p. 18) differentiates basic values from specific "**attitudes**" which refer to predispositions toward more specific ideas or actions. Rokeach also documented that basic values determine specific attitudes (e.g., political, pacifist, profamily, antireligious), specific beliefs, as well as behaviors. Value change leads to attitude and behavior change. Rokeach (e.g., 1969, p. 24) has pointed out that values are standards which may be employed for a variety of **functions**, i.e., they may: (a) guide conduct; (b) predispose us to specific beliefs and ideologies; (c) provide a frame of reference for self evaluation; (d) be used as standards for praising or condemning others; (e) be used to rationalize one's own conduct; and (f) provide reasons for feeling superior to others.

Rokeach (1973, p. 3) outlined his **postulates** about the nature of values as follows:

> "(1) The total number of values a person possesses is relatively small; (2) all men everywhere possess the same values to different degrees; (3) values are organized into value systems; (4) the antecedents of human values can be traced to culture, society, and its institutions and personalities; (5) the consequences of human values will be manifested in virtually all phenomena that social scientists might consider worth investigating and understanding."

Feather (1980, pp. 254-255) has pointed out that the challenges ("developmental tasks") which **adolescents** face also affect their value systems. He theorized that some values would be especially prominent during adolescence: achieving freedom and true friendship (terminal) and being honest and responsible (instrumental). He (pp. 255-256) also theorized that differing developmental tasks of adolescent boys and girls would result in some **gender** differences in value systems. Therefore, in a comparison of boys and girls, one would predict that values related to achievement (e.g., success) and freedom would be more prominent in boys and values related to intimate relationships (e.g., honesty) would be more prominent in girls (pp. 272-273).

It is important for religious educators to understand the value systems of their students. The value systems of high-school students may be modified by religious schooling. However, the value systems which adolescents bring into the religious schools may be incompatible with the **schools' educational goals**, and may thereby reduce the effectiveness of religious education. Moreover, Feather (1975, pp. 70-81; 1980, pp. 276) found that students who perceived a discrepancy between their own and that of their school's value systems tended to be more dissatisfied with their school than were students who perceived a similarity between their own and their school's value systems.

In their two national studies of **Canadian teenagers**, Bibby and Posterski (1985, pp. 13-26; 1992, pp. 13-30) selected some of Rokeach's terminal and instrumental values which are of special significance to Canadian adolescents. Both the 1985 and 1992 cohorts of adolescents identified "freedom", "friendship", and "being loved" as the most-endorsed terminal values; "cleanliness", "honesty", and "humor" were the most-endorsed instrumental values. When the authors compared the endorsements of values of the 1985 and 1992 cohorts, the authors found few changes in values, except that the endorsement of **personal-relations values** (e.g. honesty, forgiveness, politeness, working hard) had markedly declined. This decline was much greater for boys than for girls. The authors attributed the decline in personal-relations values to an accelerated individualism in North American society (1992, pp. 164-170). Adolescents do value good relationships, but they have become unwilling to pay the cost of achieving and maintaining good relationships. The authors also pointed out that, compared to nonreligious adolescents, religious adolescents endorsed personal relations values, like honesty, forgiveness, and generosity much more (1992, p. 248), because religious groups systematically teach these values.

Schludermann and Schludermann (1995) selected some of Bibby's and Posterski's values for their study of **Mennonite and**

Catholic high schools. They factor analyzed the set of values and identified distinct factors of values: (1) self-development values (e.g., success, comfortable life, excitement); (2) autonomy values (e.g., freedom, privacy); (3) **personal relations values** (e.g., friendship, being loved, family life, honesty, working hard). They found that religiosity had no significant relations to self-development and autonomy values. However, they did find a highly significant relation between religiosity and personal-relations values; that is, more-religious adolescents endorsed personal-relations values much more. The authors also asked 15 administrators of Catholic and Mennonite schools to rank order 8 terminal and 6 instrumental values to be **promoted by their schools**. They then compared the value systems (i.e., rank order of values) of (1) a national sample 3600 Canadian adolescents, mostly from public schools (Bibby and Posterski, 1985 data); (2) 1980 students from Catholic and Mennonite high schools; (3) 15 Catholic and Mennonite school administrators. The value system of religious-schools students agreed more with that of religious-schools administrators than with that of a national sample of adolescents. For instance, in contrast to public-school adolescents, religious-schools students and administrators agreed by ranking family life much higher and by ranking the self-development values of success and comfortable life much lower (p. 136).

Comment: The present study has been designed to explore the relation between adolescents's religious commitment and their endorsement of prosocial values (personal-relations values, idealism, morals) in a more rigorous and systematic way than did previous studies. The strong positive relation between Christian commitment and prosocial values is understandable, if one considers the value system stressed by **Judeo-Christian teachings**. In contrast to secular culture, which stresses self development and individualistic autonomy, Jesus stressed as the "greatest commandments" (1) love for and accountability to God (e.g., Matthew 22:37, citing Deuteronomy 6:5) and (2) obligations for the welfare for other human beings (e.g., Matthew 22:39, citing Leviticus 19:18). Like everybody else, committed Christian do value self development and autonomy, but (compared to nonreligious persons) their value system has other priorities.

1.4. Adolescent Development

Adolescent development is usually conceptualized as a transition from childhood to adulthood and as a preparation for adulthood. Good adjustment of adolescents requires the successful mastery of a series of **developmental tasks**, such as, academic achievement, a positive identity, constructive coping with emotional stress, a consistent value system, good relations with peers and adults, preparation for future marriage, work, and citizenship etc. Studies (e.g., Benson, 1990; Blum and Rinehart,

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1997) have identified several **assets** which facilitate the mastery of such developmental tasks e.g., family support, parental monitoring, a positive school climate, positive peer influences, church and synagogue involvement. These studies have also identified several **risk factors** which hinder the mastery of developmental tasks, such as social isolation, television overexposure, family conflict or breakup, negative peer pressure, poverty etc. Risk factors also increase the likelihood of **problem behaviors**, such as school drop out, smoking and drinking, drug use, reckless driving, sexual activity, shoplifting etc. The exposure to a risk factor does not mean that all adolescents exposed to that risk factor will show problem behavior; it only means that, compared to other adolescents, adolescents with this risk factor engage in significantly more problem behavior. There are also **protective factors** which reduce the problem behaviors associated with risk factors. For instance, growing up with divorced parents is a risk factor which increases the likelihood of school drop out and other problem behaviors; however, church and synagogue involvement functions as a protective factor for adolescents with divorced parents in that it greatly reduces their problem behaviors (e.g., Benson, 1990, p. 77). From this perspective, religious involvement may function both as an asset by promoting the successful mastery of developmental tasks and as a protective factor reducing problem behaviors.

Blum and Rinehart (1997) provided strong evidence that **connectedness** to family and to school represent the strongest protective factors against problem behaviors (e.g., violence, smoking, drug use, sexual behavior) and health problems (e.g., emotional distress, suicide attempts, teen pregnancy). For instance, compared to other school-related variables (e.g., school type, average daily attendance), by far the strongest protective factor is school connectedness.

Comment: The present study was designed to examine in detail the **social-facilitative function** of religious involvement for adolescent development. The investigators postulate that adolescents who are religiously involved will endorse prosocial rather than individualistic values. These values can be expected to promote in the adolescents feelings of belongingness and connectedness to their family, their school, and their church. These connections represent the **social adjustment** of adolescents. It seems very plausible that families, schools and churches where members express prosocial values like honesty, compassion, generosity, forgiveness in their relations with each others will make adolescents feel connected. Because the **personal adjustment** (e.g., self esteem, life satisfaction) of adolescents depends on feedback from their social environment (e.g., family and school), the present study predicts that good social adjustment contributes to good personal adjustment. In addition to prosocial values and social adjustment, there are other variables (e.g., temperament and personality, talents and abilities) which

contribute to personal adjustment. One would therefore expect that religiosity is more directly and closely related to social adjustment than to personal adjustment.

The present study postulates the following **path model**: The religious involvement of parents fosters the religiosity of adolescents (e.g., Schludermann and Schludermann, 1990, p. 182-184); the adolescents' religiosity fosters the endorsement of prosocial values; prosocial values facilitate social adjustment; social adjustment promotes personal adjustment. The model predicts that religiosity is more strongly correlated with social adjustment than with personal adjustment. The research was designed to test this model in a rigorous way (see Section 3.7.).

2. THE RESEARCH STRATEGY

2.1. The Overall Design

Because the validity of a study's conclusions depends greatly on the quality of its research design, it is helpful to provide the reader with an overview of the **research strategy**. The study had the general aim to explore the role of adolescents' religious commitment in the formation of values and (personal and social) adjustment. The **goals** of the research strategy were: (a) to obtain a gender-balanced sample which was large enough for sophisticated statistical analyses; (b) to select as far as practical, several scales (measures) of the key variables under study (e.g., religiosity, prosocial values, self esteem); (c) to use sophisticated methods of statistical analysis which allowed one to distinguish between direct and indirect effects of religiosity (i.e., Structural Equation Modeling).

Sophisticated statistical analyses require a large **sample** size. If the sample size is too small for the statistical procedure, the results may be insignificant or may be dismissed as attributable to chance factors. It is also very desirable that the sample contain about equal numbers of boys and girls. If the gender ratio is very uneven, the results are difficult to interpret. Do the observed trends apply to adolescents of both genders or do they apply to one gender only? Because one cannot assume without evidence that religious commitment plays the same role in adolescent boys and girls, it is important to analyze the data from boys and girls separately and to compare the trends of the two genders. The sample size of one gender only has to be sufficiently large for appropriate statistical analyses.

There are usually several distinct **measures or scales** of a given variable (e.g., religiosity). If a study uses only a single scale of a variable, the critical reader can always question as to whether the trends with that particular scale are also generalizable to other scales of that variable. For

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instance, if one uses religious beliefs and practices as an measure of religiosity, and finds that this measure is correlated with good family satisfaction, the critical reader may argue that this does not prove that religiosity promotes family satisfaction, because it is possible that another scale of religiosity may be predictive of poor family satisfaction. It is therefore helpful to have several scales of the key variables of the study. There is however the constraint that in a religious school all the data have to be collected within a class period of about 45 minutes. One way of getting around this constraint, is to refine and shorten the scales, so that (1) several short scales of a variable can be administered within a class period, but (2) the scales used have good methodological properties.

When the main thesis of a study (i.e., the social-facilitation effect of religiosity) is controversial, the **statistical analyses** should be as conclusive as possible. Simply providing data that, compared to nonreligious adolescents, religious adolescent have higher scores on "good variables" or that religiosity is positively correlated with a "good" variable is insufficient to convince a critic of religious education. It is very helpful to propose a detailed model of how religiosity works and then determine the fit of the data to that model. When religiosity is correlated with another variable (e.g., good school attitudes), it is helpful to examine as to whether this correlation represents a direct effect of religiosity (e.g., religiosity ==> good school attitudes), or whether this correlation represents an indirect effect mediated by a third variable (e.g., religiosity ==> prosocial values ==> good school attitudes).

2.2. The Sample

The data of this study came from three **Catholic high-schools** in Winnipeg: (1) St. Boniface Diocesan High School (both genders, N = 109); St. Mary's Academy (girls only, N = 317); (3) St. Paul's High School (boys only, N = 315). The Total Sample comprised 741 high-school students from Grades 9 to 12 (369 boys and 372 girls). When gender-specific statistical analyses were run, the boys of St. Boniface were pooled with the boys of St. Paul's and the girls of St. Boniface were pooled with the girls of St. Mary's.

The above sample sizes refer to the numbers of students who had **complete records**. Only data from students who answered all the items in the questionnaires were used in the statistical analyses. Incomplete records were discarded. There was thus no need to make statistical estimates of missing scores.

The sample size and composition had several **strengths**, which enhance the conclusiveness of this study. The sample was very gender balanced, that is, there were almost equal numbers of boys

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and girls. The sizes of the subsamples of boys and girls were sufficiently large, so that Structural-Equation analyses of the subsamples could still give reliable results.

The data were **collected** by the teachers during a single class period of about 45 minutes. The teachers distributed questionnaires and machine-scorable answer sheets. The students read the items in the questionnaire and then used pencils to shade in the appropriate spaces in the answer sheet. The students were asked not to write their names on the answer sheets. However, they were asked to code their genders, their schools, their birth dates, and their grade levels. It was thus possible to provide a detailed demographic description of the sample.

2.3. The Statistical Indices and Procedures

Because not all readers of this report are familiar with statistical procedures, it is helpful to give a simplified overview of the statistical indices and procedures used in this study.

The 14 scales of this study vary as to the **number of items**. They may have thus different minimum scores, different middle scores and different maximum scores (e.g., for a 5-items scale the minimum score = 5, the middle score = 15, the maximum score = 25; for an 8-items scale the minimum score = 8, the middle score = 24, and the maximum score = 40). It requires some effort to interpret the scores of scales with different numbers of items (e.g., compare the score of 18 from a 5-items scale with the score of 23 of an 8-items scale). In order to facilitate comparisons of scores from scales with different numbers of items, the scale scores were subjected to linear transformations (multiply the scale score by a constant, then subtract another constant) so that all **transformed scores** have a minimum score of 1.0, a middle score or neutral point of 5.0, and maximum score of 9.0. The minimum, middle, and maximum scores were decided upon because they were convenient. The formula for the linear transformation was: transformed score = scale score * (2:n) - 1, where n is the number of items in the scale. Converting scale scores into transformed scores does not change the correlations between variables (e.g., correlation between religiosity and schools attitudes), factor analyses, Structural Equation Modeling or the results of tests of significance (e.g., t-tests, Analyses of Variance). See Section 3.1. for examples of transformed scores.

The simplest statistical index used is the **Mean**. The Mean is obtained by adding up all the scores and then dividing this sum by the number of scores. The **Standard Deviation** is a summary measure of the amount of individual differences found in a group. A larger Standard Deviation indicates that there is a wider spread of scores in a group. See Section 3.1. for examples of

Means and Standard Deviations. The **Variance** refers to the square of a Standard Deviation; the Variance can be treated as a quantity and partialled into components. When one compares the Means of two groups (e.g., boys versus girls), one wants to know as to whether the difference between the two Means is significant or can be attributed to random-chance factors. The significance of differences in Means is examined by **t-tests**. Significant t-tests indicate that the results cannot be attributed to random-chance variation and must be taken seriously. One obtains significant t-tests, if the difference between Means is sufficiently large and the sizes of the Standard Deviations are sufficiently small. For a given sample size, larger t-values tend be associated with more stringent significance levels. See Section 3.3. for examples of t-tests. The significance of differences of two or more Means can also be examined by **Analyses of Variances** (expressed by **F-values**). For a given sample size, larger F-values tend to be associated with more stringent significance levels. Significant Analyses of Variances can be interpreted in the same way as significant t-tests. However, Analyses of Variances allow one to make estimates about **Magnitudes of Effects**. If a sample is large enough, the difference between Means may be highly significant (confidence that results are not attributable to chance factors), but may be still too small to be of any practical significance. The Magnitude of Effect is expressed by **Omega Square** or $\omega 2$ which indicates the amount of Variance (square of Standard Deviation) accounted for by the difference in Means. As a simple rule, the ω^2 should be larger than .01 to indicate a practical difference. For instance, compared to boys, girls have highly significantly larger Means for Personal Relations Values and Idealism; the corresponding ω^2 are .074 and .033; thus gender accounts for twice the Variance of Personal Relations Values than for Idealism. See Section 3.2. for examples of Analyses of Variance.

The present study explored the correlations between variables. For instance, do more-religious adolescents endorse prosocial values more? The strength of a correlation is expressed by a **correlation coefficient** or r. A correlation coefficient of 1.0 indicates a perfect correlation; an r of 0.0 indicates no relationship between variables. A positive correlation indicates that high scores on the first scale tend to be associated with high scores on the second scale. A negative correlation indicates that high scores on the first scale tend to be associated with low scores of the second scale. Statistical tests can be run in order to examine as to whether a given correlation coefficient is significantly different from zero. When sample sizes are increased, the lowest correlation coefficient which is significantly different from zero becomes smaller. For instance, when the sample size is 741, the correlation coefficient has to be larger than .14 to be significantly different from zero; when the sample size is 369 the correlation coefficient has to be larger than .19 to be significantly different from zero. See

Section 3.4. for examples of correlations coefficients.

The present study used **Factor Analysis** to consolidate scales of a single variable into a single score. For instance, the four religiosity scales (Beliefs and Practices, Religious Orientation, Function of Religion, and Attitude to Christianity) have substantial intercorrelations from .65 to .82. These high intercorrelations indicate that these four religiosity scales share a common part of their Variances. The Variance of a given religiosity scale can be subdivided into three components: (1) the reliable Variance which is shared with the other religiosity scales; (2) reliable Variance which is specific to that scale; (3) unreliable Variance (e.g., errors or inconsistencies of students answering the questionnaire items). The large common core of shared Variance indicates that the four religiosity measures may be indicators of an underlying factor or dimension of religiosity. Thus, when a student is "religious" one would expect him/her to endorse religious beliefs and practices, to be guided by his/her faith in his/her daily life, to think that religion has beneficial consequences, and to have a positive attitude to Christianity. By means of factor analysis, one extracts the shared and reliable variance of the four religiosity scales and substitutes a single **factor score** for the four religiosity scales. Factor analysis results in a table of factor loadings, which indicates the strength of contributions of the scale to the factor scores: For instance, Function of Religion has a factor loading of .81 and Attitude to Christianity has a factor loading of .93 on the Religiosity Factor; thus, Attitude to Christianity makes a greater contribution to the Religiosity Factor than does Function of Religion. As a simple rule, the factor loading of a scale has to be larger than .40 in order to make a significant contribution to the factor score. In general, compared to scale scores, results based on factor scores tend to be more reliable (unreliable Variance is eliminated) and more generalizable. In the present study, multiple scales of religiosity, of prosocial values and of self esteem were consolidated into factor scores. See Sections 2.5., 2.6., and 2.8. for examples of how factor analyses were used to consolidate scale scores into factor scores.

Very often, the variables may have multiple-stage effects on other variables. For instance, religiosity may promote prosocial values, prosocial values may promote good school attitudes, and good school attitudes may promote self esteem. In the **Structural Equation Modeling**, the researcher proposes a path model about such effects and tests out as to whether the data fit the proposed model. The model distinguishes between **measured variables** (scales or parts of scales) and **latent variables** (factor scores which extract the shared variances of the measured variables). Two or more measured variables are needed to generate a given latent variable. For instance, the Beliefs and Practices, Religious Orientation, Function of Religion, and

Attitude to Christianity scales are the measured variables and the Religiosity factor is the latent variable. One can split a given scale into two or more parts in order to produce enough measured variables for the calculation of a latent variable. For instance, the Family Religion scale was split into two parts (i.e, a 2-items part and a 3-items part), so that one could calculate Family Religion as a latent variable in the path diagram. In the **path diagram**, measured variables are represented by rectangular boxes, and the latent variables by ellipses. The path model connects the latent variables. The correlation between any two latent variables (e.g., Religiosity and School Attitudes) in broken down into two components: (1) a direct effect (e.g., Religiosity ==> School Attitudes) and (2) an indirect effect (e.g., Religiosity ==> Prosocial Values ==> School Attitudes). The results of the Structural Equation Modelling are expressed by a path diagram which indicates the direct effects of latent variables on each other. The **path coefficients** indicate the strength of the direct effects (path) between any two variables; larger path coefficients indicate stronger effects. One can calculate the **significance level** of path coefficients. There are several indicators of the **goodness of fit** between the data and the model: for a good fit, the χ^2/(degrees of freedom) should be < 2.0 and other goodness-of-fit indices should be > .90.

When one runs a statistical test, one has to decide on a **level of significance**. How likely is it that the results may be attributable to chance factors? The usual significance levels selected by researchers range from $p < .05$ to $p < .0001$. In the present study, the investigators usually selected the most stringent significance level, i.e., $p < .0001$. At this level, the odds against that the observed results could be attributable to chance factors was ten thousand to one. The investigators of this study wanted to be very sure that the observed trends could not be dismissed as chance effects.

2.4. The Selection and Refining of Measures

The present study had to cope with the following **problem**: (1) It is helpful to use several scales of the key variables; but (2) all the data collection had to be done within a single class period of about 45 minutes; (3) simply shortening a scale by random elimination of items, results is a scale with poorer methodological properties (e.g., poorer reliability and validity). The problem was solved by item and factor analyses.

Before the present study was designed, the longer scales were administered to **other samples**: such as, 444 students attending Mennonite high schools; 1432 students attending Catholic junior and senior high schools in 1987; 611 first-year psychology students at the University of Manitoba. Using these data sets, the correlation coefficients between scale items were

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calculated. Items which had low correlations with other items were eliminated. The surviving items were then subjected to factor analyses; items which had insignificant (< .40) factor loadings were eliminated; the items which survived this screening were factor analyzed again. The procedure was repeated until one obtained a set of items with substantial intercorrelations and with high loadings on a single factor. The resulting shortened scale was much shorter then the original scale (e.g., School Attitudes from 85 to 20 items), but the shortened scale had much better methodological properties.

Several procedures were used to facilitate answering the **questionnaire** and the interpretation of the results: (1) Regardless of the number of response alternatives in the original scale, in this study all scales had 5 response alternatives. (2) Regardless of the direction of scoring (i.e., Strongly Agree = 1 versus Strongly Agree = 5) of the original scale, in the present study, higher item scores meant stronger agreement, greater frequency, more satisfaction etc. The scales had both **positive and negative items**. Agreement with a positive item increased the scale score, while disagreement with a negative item increased the scale score. For instance, for the School Attitude Measure, where all items are negative, the students who disagreed with most of the items had the best attitudes toward education. Regardless whether a given scale has positive or negative items, the scale-scoring system was adjusted in such a way, that higher scale scores indicated the scale name (e.g., more Family Satisfaction) or more favorable scores (e.g., better School Attitudes).

2.5. The Measures of Religiosity

The **Family Religion** (FAMREL) scale is a 5-items scale which measures the religious involvement of the adolescent's family members. All items are positive. Examples: How frequently do your family members engage in the following activities?

83) How often does your father attend worship services? (+)
85) How often do you have family devotions (get-together of family members for prayer) at home? (+)]]

Response alternatives from "almost never" to "almost every week or more often".

The **Beliefs and Practices** (BELPRA) scale is a 7-items scale which measures the adolescent's Christian beliefs, private religious practices as well as the religious self identification. All items are positive. Examples:

124) Do you believe...: that Jesus was the divine son of God? (+)
Alternatives from "definitely not" to "yes definitely".
127) How often do you.: pray privately at home? (+)
Alternatives from "never" to "very often".
129) Which of the following comes closest to describing the nature of <u>your</u> religion? Select the best alternative: (+)

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I am not a religious person = 1;
I find myself interested in a variety of religions, but am not committed to any particular one = 2;
I have a mild interest in Christianity and other religions, but I do not see myself as deeply religious = 3;
I am deeply committed to a religion other than Christianity = 4;
I regard myself as a committed Christian = 5.

The **Religious Orientation** (RELORI) scale is a 8-items scale which measures the extent to which one's religious faith guides one's daily life. All items are positive. Examples:
How much do you agree or disagree with the following statements?
108) I think that God is interested in all aspects of my life (e.g., school, family, friendships, entertainment). (+)
112) I want to become the person God is calling me to be. (+)
Alternatives from "strongly disagree" to "strongly agree".

The **Function of Religion** (FUNREL) scale is a 10-items scale which measures the belief whether religion has good or bad effects. Half of the items are positive and half of the items are negative. Examples:
How much do you agree or disagree with the following statements?
86) Religion helps people to lead good moral lives. (+)
89) Religion discourages people from making the best of their abilities and good qualities. (-)
Alternatives from "strongly disagree" to "strongly agree".

The **Attitude to Christianity** (ATTCHR) scale is a 7-items scale which measures the attitude to the Christian faith. It has both positive and negative items. Examples:
Please indicate your agreement or disagreement with the following statements:
131) I think going to church is a waste of my time. (-)
135) I know that Jesus is very close to me. (+)
Alternatives from "disagree strongly" to "agree strongly".

The set of the four religiosity scales (i.e., Beliefs and Practices, Religious Orientation, Function of Religion, and Attitudes to Christianity) was factor analyzed and consolidated into a **Religiosity Factor** (RELFAC). The factor loadings of the four scales were very high; they ranged from .81 to .93. The Religiosity Factor was used as the input for statistical analyses.

2.6. The Measures of Prosocial Values

The **Personal Relations Values** (PERREL) scale is a 10-items scale which measures the endorsement of values which involve or maintain personal relations. All items are positive. Examples:
How important are the following to you?

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3) Family life (+)
7) Honesty (+)
Alternatives from "not important" to "very important".

The Offer's **Idealism** (OFF-ID) scale is a 6-items scale which measures a person's willingness to make sacrifices for the welfare of persons one does not know. It has both positive and negative items. Examples:
The statement describes me:
35) I am going to devote my life to helping others. (+)
40) There is nothing wrong with putting oneself before others. (-)
Alternatives from "not at all" to "very well".

The Offer's **Morals** (OFF-MO) scale is a 10-items scale which measures a person's reluctance to harm others in one-to-one relationships. It has both positive and negative items. Examples:
The statement describes me:
75) I do not care how my actions affect others as long as I gain something. (-)
79) I do not believe in taking revenge if someone hurts me. (+)
Alternatives from "not at all" to "very well".

The set of the three Prosocial Values scales was factor analyzed and consolidated into the **Prosocial Values Factor** (PROFAC). The factor loadings of the three scales ranged from .76 to .81. The Prosocial Values Factor was used as the input for statistical analyses.

2.7. The Measures of Social Adjustment

The **Family Satisfaction** (FAMSAT) scale is a 14-items scale which measures the adolescent's satisfaction with his/her family. All items are positive. Examples:
How satisfied/dissatisfied you are with the following aspects of your family life?
11) with how close you feel to the rest of your family? (+)
24) with the number of things your family does together? (+)
Alternatives from "dissatisfied" to "extremely satisfied.

The **School Attitude Measure** (SAM-20) is a 20-items scale which measures the adolescent's attitude to his/her education. All items are negative. Examples:
How do you feel about the following statements?
54) I sometimes don't pay attention in school because most subjects are too difficult. (-)
67) I don't care about school and plan to stop as soon as I can. (-)
Alternatives from "strongly disagree" to "strongly agree".

2.8. The Measures of Personal Adjustment

The **Rosenberg Self-Esteem Scale** (ROSENB) is a 10-items scale which measures an adolescent's overall self esteem. It has both positive and negative items. Examples:
Indicate your degree of agreement or disagreement.
25) On the whole, I am satisfied with myself. (+)
30) I certainly feel useless at times. (-)
Alternatives from "strongly disagree" to "strongly agree"

The **Coopersmith Self-Esteem Inventory** (COOP12) is a 12-items scale which measures an adolescent's overall self esteem. It has only negative items. Examples:
This statement describes a person who is:
96) There are lots of things about myself I would change, if I could. (-)
106) I often wish I were someone else. (-)
Alternatives from "not at all like me" to "very much like me".

The **Self Activity Inventory** (SAI-10) is a 10-items scale which measures the social-emotional self esteem of adolescents. It focuses on unpleasant emotions. All items are negative. Examples:
I am a person who...:
43) is afraid to try something new. (-)
47) worries about whether other people like him/her. (-)
Alternatives from "never" to "very often.

The set of the three self-esteem scales was factor analyzed and consolidated into the **Self-Esteem Factor** (SELFAC). The factor loadings ranged from .74 to .90. The Self-Esteem Factor was used as the input for statistical analyses.

The **Life Satisfaction** (LIFSAT) scale is a 7-items scale which measures one's overall satisfaction with one's life situation. It has both positive and negative items. Examples:
Please indicate your agreement or disagreement with the following statements:
116) In most ways my life is close to what I really want it to be. (+)
118) My life is pretty miserable. (-)
Alternatives from "strongly disagree" to "strongly agree".

3. THE RESULTS

3.1. Means: Total Sample

In order to facilitate comparison of scales with different number of items, a **linear transformation** was applied to all 14 scales of this study. The constants were chosen in such a way that the minimum possible score = 1.0, the middle score or neutral point = 5.0, and the maximum possible score is 9.0. This linear

transformation does not change the correlations between scales or the significance of differences between scale scores. The next table reports the Means (M) and Standard Deviations (s.d.) of the 14 transformed scores.

MEANS AND STANDARD DEVIATIONS OF TRANSFORMED SCORES

SCALES	Total Sample	
	Mean	s.d.
Family Religion	5.47	1.84
Function of Religion	6.25	1.38
Religious Orientation	5.41	1.94
Beliefs and Practices	5.92	1.73
Attitude to Christianity	5.73	1.81
Personal Relations Values	7.15	1.26
Idealism	5.71	1.07
Morals	6.22	1.10
Family Satisfaction	5.32	1.42
(Good) School Attitudes	6.25	1.39
Rosenberg's Self Esteem	6.16	1.48
Worchel's Self Esteem	5.38	1.31
Coopersmith's Self Esteem	5.78	1.78
Life Satisfaction	5.54	1.61

The results indicated that all Means scores were on the favorable side of the neutral point of 5.0. The **Family Religion** results indicated that most students came from moderately religious homes; the very large Standard Deviation indicated that families differed greatly in their religious involvement. The four **Religiosity** scales had Means on the positive side of the neutral point, but their Means differed considerably. The very high Means scores and relatively small Standard Deviations of the **Function of Religion** scale indicated that most students had a consensus that religion is beneficial rather than detrimental. The **Religious Orientation** scale had the lowest Mean, but a very large Standard Deviation. This result indicated that many students had some difficulty in relating their faith to their day-to-day living. The two other religiosity scales **Beliefs and Practices** and **Attitude to Christianity** were intermediate between Function of Religion and Religious Orientation. The different Means of the religiosity scales should not be surprising: There

is little personal cost involved in believing that religion is beneficial; however, one has to make some sacrifices in applying one's faith to day-to-day living. See Section 4.2. about suggestions as to how schools can help their students in this area.

Among the **Prosocial Values** scales, the **Personal Relations Values** scale had the highest Mean and a small Standard Deviation. This finding indicated that there was a strong consensus among students in the endorsement of personal relations values. The **Morals** scale also had a high Mean and a small Standard Deviation. Most students agreed that one should not hurt other people whom one meets in one's daily life. Among the three scales, the **Idealism** scale had the lowest Mean. This scale refers to the willingness to make sacrifices for persons whom one does not know personally. Among the three scales Idealism involves the greatest personal cost; it is not surprising that among the three Prosocial Values scales, this scale has the lowest endorsement. See Section 4.3. about suggestions for promoting prosocial values.

Among the **Social Adjustment** scales, the **School Attitude** scale had a high Mean and a low Standard Deviation. This result indicated that most students took their education very seriously. The **Family Satisfaction** results indicated that most students were moderately, rather then highly satisfied with their families.

Among the **Personal Adjustment** scales, there was a range of Means of the self-esteem scales. The **Rosenberg Self-Esteem** scale had the highest Mean and the **Self Activity Inventory** had the lowest Mean. Such results indicated that most students felt very good about some aspects of themselves, but had mixed feelings about other aspects. The Rosenberg scale focuses on an overall self assessment, while the Self Activity Inventory focuses on one's negative emotions (e.g., anger, feeling hurt, nervousness, worry). The results of the **Life Satisfaction** scale indicated that most students were moderately satisfied with their lives, but there was a substantial range in the level of satisfaction.

Comment: Overall, the result represent **good news** for Catholic schools. Most students have a positive attitude to their religion, they highly endorse prosocial values, and have reasonably good social and personal adjustment. The students strongly support the educational mission of Catholic schools. There are however some areas where there is room for improvement: Schools should give students more explicit guidance about relating their faith to day-to-day living (see Section 4.2.), how to get along with their families, how to cope with negative emotions, and how to have a more positive outlook on life (see Section 4.4.). The Christian faith provides good resources in these area, but these resources have to be utilized. In contrast to public schools, religious schools have the opportunity to

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utilize these resources.

The overall trends are **replicable** across samples. For a sample of 444 students attending Mennonite high schools, Personal-Relations Values had the highest Mean score (7.59) and Idealism had the lowest Mean score (5.91) among the Prosocial Values scales; School Attitudes had a higher Mean (6.56) than did Family Satisfaction (5.34); among the Personal Adjustment scales, the Rosenberg scale had a higher Mean (6.21) than did the Self Activity Inventory (5.49). In contrast to the Catholic Schools Study, the results from Mennonite schools are somewhat weakened by the fact that the Mennonite sample was much smaller and was not gender balanced (192 boys versus 252 girls). Nevertheless, the fact that the major trends were replicable across denominations, increases our confidence about the results from the Catholic Schools Study.

3.2. Means: Gender

In the next set of analyses, the data (transformed scores) from the Total Sample were broken down into the results from 369 boys and 372 girls. The gender differences in Means were then tested by **Analyses of Variance**. See Section 2.3. for an introduction to Analysis of Variance. The first column of the Analyses of Variance reports the *F*-values. In general, larger *F*-values go with larger gender differences. The next column reports the significance level of the *F*-values. As has been mentioned earlier, a very stringent significance level was decided upon, that is $p < .0001$; the odds against the these gender differences being attributable to random chance are ten thousand against one. The next column reports the ω^2-values. These values estimate the Magnitude of Effects, or how much of the variance is accounted for by gender differences. The ω^2-values were only reported for *F*-values which were significant at $p < .0001$.

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GENDER DIFFERENCES IN MEANS OF TRANSFORMED SCORES

SCALES	Boys		Girls		Anal. of Var.		
	Mean	s.d.	Mean	s.d.	F 1,739	sig	ω^2
FAMREL	5.45	1.86	5.49	1.82	0.06	ns	.
FUNREL	6.09	1.47	6.42	1.27	11.21	ns	.
RELORI	5.36	1.97	5.45	1.92	0.43	ns	.
BELPRA	5.86	1.83	5.98	1.69	0.87	ns	.
ATTCHR	5.60	1.80	5.86	1.81	4.00	ns	.
PERREL	6.81	1.39	7.50	0.99	60.27	*	.074
OFF-ID	5.51	1.14	5.90	0.96	26.22	*	.033
OFF-MO	5.89	1.12	6.56	0.97	74.92	*	.091
FAMSAT	5.38	1.43	5.27	1.40	1.13	ns	.
SAM-20	6.24	1.40	6.25	1.38	0.01	ns	.
ROSENB	6.37	1.46	5.94	1.48	15.61	*	.019
SAI-10	5.53	1.33	5.23	1.26	9.72	ns	.
COOP12	6.00	1.66	5.56	1.87	11.25	ns	.
LIFSAT	5.67	1.54	5.40	1.67	5.01	ns	.

Note: * significant gender differences at $p < .0001$; ns not significant at this level. Abbreviations: FAMREL = Family Religion, FUNREL = Function of Religion, RELORI = Religious Orientation, BELPRA = Beliefs and Practices, ATTCHR = Attitude to Christianity, PERREL = Personal Relations Values, OFF-ID = Idealism, OFF-MO = Morals, FAMSAT = Family Satisfaction, SAM-20 = School Attitudes, ROSENB = Rosenberg's self esteem, SAI-10 = Self Activity Inventory, COOP12 = Coopersmith's self esteem, LIFSAT = Life Satisfaction.

The results indicate that most gender differences were not significant at $p < .0001$. The **Rosenberg** self esteem scale was significant at this level, but the difference was not of practical importance, because the associated ω^2 was small. However, there were highly significant and substantial gender differences on all three **Prosocial Values** scales. On all three scales, girls had much higher Means than boys. The gender difference was greatest on the **Morals** scale and was smallest on the **Idealism** scale. Compared to boys, girls were much more concerned about not hurting persons whom they knew.

Comment: The above trends were highly **replicable** across samples. With the sample of 444 **Mennonite** schools students gender differences were insignificant for the Religiosity scales, Family Satisfaction, School Attitudes, Self Esteem and Life

Satisfaction. However, girls had significantly higher scores on the three Prosocial Values scales than did boys. Here again, gender differences were greatest for Morals and smallest for Idealism. Unpublished data from a sample of 507 first-year **university** psychology students, indicated no significant gender differences on the four religiosity scales, Family Satisfaction, the three self-esteem scales, and Life Satisfaction. There were again highly significant gender differences on the Prosocial Values scales; the gender differences were greatest for Morals and smallest for Idealism. These highly replicable trends can be explained by the view that maintaining good personal relations is a more salient developmental task for adolescent girls than it is for boys (see Feather, 1980, pp. 272-273). Among boys, personal-relations values tend to compete with the needs for success and freedom.

3.3. Personal Relations Values: Gender

The next table reports the Means and Standard Deviations of the **10 individual values** of the Personal Relations Values scale. For individual values, the minimum score (not important) is 1, the middle score or neutral point (somewhat important) is 3, and the maximum score (very important) is 5. All values tended to be on the favorable side of the neutral point. The values were ranked according to their relative importance. For the Total Sample, Friendship, Being Loved, and Honesty had the top ranks and Compassion, Generosity and Politeness had the bottom ranks.

The results from **boys and girls** were reported separately, and *t*-tests were used to establish the significance of gender differences. See Section 2.3. for an introduction of *t*-tests. In general, larger *t*-values indicated larger gender differences. The significance level used was $p < .0001$. For all gender comparisons, girls rated the personal relations values higher, but not all gender differences were significant. Six gender differences were highly significant: ranked according to *t*-values, they are Being loved, Honesty, Friendship, Family life, Compassion, and Forgiveness. The gender differences of the four remaining values were not significant: Reliability, Working hard, Generosity, Politeness.

Comment: The above trends were again **replicable** across samples. The study of the 444 **Mennonite** school students had only 7 personal relations values (rather than the 10 values of the Catholic-schools study). Here again the three values with the highest ranks were Friendship, Being loved, and Honesty. Gender differences were significant for Friendship, Being loved, Honesty, Family life. Gender differences were not significant for Reliability and Working hard. The 10-items Personal Relations Values scale was used with the 507 **university students**. Here again, the three top values were Friendship, Being loved, and Honesty; the three bottom values were Generosity, Politeness, and

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Family life. The university students agreed with the religious-schools students about the low ranking of Generosity and Politeness; however the Catholic- and Mennonite-schools students rated Family life much higher.

PERSONAL RELATIONS VALUES: MEANS

VALUES		Total	Boys	Girls	t(739)	p
(1) Friendship	M	4.55	4.36	4.75	7.42	.0001
	s	0.74	0.85	0.55		
(2) Being loved	M	4.47	4.17	4.77	10.84	.0001
	s	0.82	0.97	0.48		
(3) Honesty	M	4.23	3.98	4.49	7.85	.0001
	s	0.92	1.04	0.71		
(4) Forgiveness	M	4.11	3.92	4.29	5.45	.0001
	s	0.92	1.02	0.77		
(5) Reliability	M	4.10	4.02	4.18	2.34	ns
	s	0.89	0.92	0.85		
(6) Working hard	M	4.04	4.01	4.07	0.90	ns
	s	0.93	1.02	0.84		
(7) Family life	M	3.94	3.70	4.17	6.29	.0001
	s	1.04	1.12	0.89		
(8) Compassion	M	3.80	3.59	4.01	6.19	.0001
	s	0.96	1.04	0.82		
(9) Generosity	M	3.81	3.70	3.93	3.38	ns
	s	0.93	0.99	0.84		
(10) Politeness	M	3.72	3.60	3.83	3.23	ns
	s	1.00	1.07	0.92		

Note: ns = not significant at $p < .0001$. N: Boys = 369, Girls = 372; Response Alternatives: 1 = not important, 2 = slightly important, 3 = somewhat important, 4 = important, 5 = very important. Abbreviations: M = Means, s = Standard Deviations.

3.4. Religiosity and Values: Gender

Factor scores of the Religiosity Factor were then correlated with the 10 individual values of the Personal Relations Values

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scale, the Idealism scale, the Morals scale and the Prosocial Values Factor. The results from boys and girls were analyzed separately. The significance level was set at $p < .0001$.

RELIGIOSITY AND VALUES

Values	correlations	
	Boys	Girls
1. Family life	.43	.32
2. Forgiveness	.38	.27
3. Working hard	.36	.15
4. Compassion	.34	.15
5. Generosity	.31	.19
6. Honesty	.36	.06
7. Politeness	.28	.17
8. Being loved	.31	.11
9. Friendship	.20	.03
10. Reliability	.19	.03
Personal Relations Values scale	.46	.24
Idealism scale	.38	.21
Morals scale	.29	.22
Prosocial Values Factor	.48	.29

Note: Correlations stronger than .20 are significantly different from zero at $p < .0001$ (Boys $N = 369$, Girls $N = 372$). Correlations which meet this significance level are in normal size and correlations which fail to meet this significance level are in small size.

The results showed a consistent trend: Girls endorsed Prosocial Values more than did boys. However, Religiosity was much more strongly correlated with prosocial values among boys than among girls. Among **boys**, Religiosity had significant correlations with 9 out of 10 Personal Relations Values; among girls only 2 of the 10 correlations were significant. The Personal Relations, the Idealism and Morals scales and the Prosocial Values Factor all had significant correlations for boys and girls, but the correlations among boys were clearly larger. The results indicated that religious and nonreligious girls tended to be quite similar in the endorsement of prosocial values. On the other hand, prosocial values were important to

religious boys, they were not important to nonreligious boys.

Among boys, religiosity had the highest correlations with Family life, Forgiveness, Honesty, and Working Hard. Religiosity had the lowest correlations with Friendship and Reliability. The low correlations of religiosity with Friendship did not mean that religious boys did not value Friendship, but it meant that religious and nonreligious boys valued Friendship to the same extent.

Comment: The above results indicated that religiosity had a strong relation with prosocial values, especially for boys. For the **Mennonite** schools students, religiosity also showed strong correlations with prosocial values (e.g., correlations with the Prosocial Values factor were .54 for boys and .42 for girls). Among the Mennonite students, the gender differences in correlations between religiosity and prosocial value were not as consistent as those found among the Catholic students. Mennonite boys had higher correlations between religiosity and most prosocial values, but there were some exceptions. Among the **university** students, religiosity tended to have significant correlations with prosocial values (e.g., with the Prosocial Values Factor .32 for men, 30 for women), but the pattern of gender differences was less clear (e.g., Personal Relations Values .29 for men, 16 for women; Idealism .30 for men, .33 for women). It is interesting to note that the Religiosity Factor was also positively correlated (.27 for men, .23 for women) with Greenberger's Social Commitment scale, which was not used in the Catholic Schools Study. The above-mentioned results indicated that religious commitment is positively, not negatively, correlated with prosocial values. The results go against the widely held view (e.g., Rokeach, 1969; Altemeyer, 1988) that committed Christians hold and promote harmful social values and thereby constitute a threat to their society.

3.4. Correlations: Total Sample

Using the data from the Total Sample, the correlation matrix was calculate for the following set of variables: Family Religion, Religiosity Factor, Prosocial Values Factor, Family Satisfaction, School Attitudes, Self-Esteem Factor, and Life Satisfaction. The correlation matrix can be found in the next table.

CORRELATIONS: TOTAL SAMPLE

	FAMREL	RELFAC	PROFAC
FAMREL	.	.39	.16
RELFAC	.39	.	.41
PROFAC	.16	.41	.
FAMSAT	.12	.25	.28
SAM-20	.07	.26	.35
SELFAC	.10	.14	.13
LIFSAT	.10	.26	.26

	FAMSAT	SAM-20	SELFAC	LIFSAT
FAMREL	.12	.07	.10	.10
RELFAC	.25	.26	.14	.26
PROFAC	.28	.35	.13	.26
FAMSAT	.	.38	.40	.51
SAM-20	.38	.	.54	.50
SELFAC	.40	.54	.	.63
LIFSAT	.51	.50	.63	.

Note: Correlations stronger than .14 are significantly different from zero at $p < .0001$ ($N = 741$). Correlations which meet this significance level are in normal size and correlations which fail to meet this significance level are in small size. Abbreviations: FAMREL = Family Religion, RELFAC = Religiosity Factor, PROFAC = Prosocial Values Factor, FAMSAT = Family Satisfaction, SCHATT = School Attitudes, SELFAC = Self-Esteem Factor, LIFSAT = Life Satisfaction.

As can be expected, **Family Religion** was a significant predictor of an adolescent's religiosity; it was also a significant predictor of Prosocial Values, but at a lower level. All other correlations of Family Religion were insignificant.

The **Religiosity Factor** had significant positive correlations with all other variables. It had the highest correlation with the Prosocial Values Factor; it had substantial correlations with Family Satisfaction, School Attitudes and Life Satisfaction; it had a marginally significant correlation with the Self-Esteem factor. Compared to nonreligious students, religious students

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endorsed prosocial values more, had better social adjustment, and were more satisfied with their lives.

As expected, the **Prosocial Values Factor** had substantial correlations with Family Satisfaction, good School Attitudes and Life Satisfaction. It did not have a significant correlation with the Self-Esteem Factor. The data supported the view that the endorsement of prosocial values contributes to good social adjustment.

The two measures of social adjustment, i.e., **Family Satisfaction** and **School Attitudes** had high correlation with the two measures of personal adjustment, i.e., the **Self-Esteem Factor** and **Life Satisfaction**. The two measures of personal adjustment had the highest correlation in the table.

Comment: The results were consistent with the proposed **social-facilitation** model of religion. That model will be tested much more rigorously by Structural-Equation Modelling (see Section 3.7.). The results do not support the widely held view that Christian commitment is associated with personal inadequacy or harmful social values. The data from the 444 **Mennonite** students tended to replicate the above results: The Religiosity Factor correlated .50 with the Prosocial Values Factor, .24 with Family Satisfaction, and .22 with School Attitudes; it had insignificant correlations with the Self-Esteem Factor and with Life Satisfaction. As expected the Prosocial Values Factor had substantial correlations with Family Satisfaction (.29) and School Attitudes (.28). The two social-adjustment measures had high correlations with the two personal-adjustment measures. The data from the 507 **university** students tended to replicate the trends of the religious-schools samples, but to a much lesser extent. Religiosity correlated .33 with Prosocial Values, but had positive and insignificant correlations with Family Satisfaction, the Self-Esteem Factor and Life Satisfaction. It can be expected that religiosity affects more areas of life in settings where religion is systematically taught and where the implications of one's faith are pointed out (e.g., in religious schools) than in the general population. It should also be remembered that the low religious commitment of most university students, could have resulted in a "floor effect" which reduced the correlations between religiosity and other variables.

3.6. Correlations: Gender

In the next analyses, the correlations were correlated for boys and girls separately. The next table shows the results.

CORRELATIONS OF FACTORS: GENDER

	FAMREL	RELFAC	PROFAC
FAMREL	.	.42, .37	.22, .08
RELFAC	.42, .37	.	.48, .29
PROFAC	.22, .08	.48, .29	.
FAMSAT	.18, .06	.36, .13	.30, .31
SAM-20	.15, .01	.32, .16	.40, .35
SELFAC	.16, .07	.20, .15	.22, .23
LIFSAT	.14, .07	.33, .20	.31, .29

	FAMSAT	SAM-20	SELFAC	LIFSAT
FAMREL	.18, .06	.15, .01	.16, .07	.14, .07
RELFAC	.36, .13	.32, .16	.20, .15	.33, .20
PROFAC	.30, .31	.40, .35	.22, .23	.31, .29
FAMSAT	.	.34, .42	.38, .48	.43, .58
SAM-20	.34, .42	.	.56, .60	.47, .54
SELFAC	.38, .48	.56, .60	.	.61, .70
LIFSAT	.43, .58	.47, .54	.61, .70	.

Note: The first correlation in each cell refers to boys and the second refers to girls. Correlations stronger than .19 are significantly different from zero at $p < .0001$ (N: boys = 369, girls = 372). Correlations which meet this significance level are in normal size and correlations which fail to meet this significance level are in small size. Abbreviations: FAMREL = Family Religion, RELFAC = Religiosity Factor, PROFAC = Prosocial Values Factor, FAMSAT = Family Satisfaction, SCHATT = School Attitudes, SELFAC = Self-Esteem Factor, LIFSAT = Life Satisfaction.

There were obvious gender differences in the correlations of the **Religiosity Factor**. Compared to girls, the data on **boys** showed consistently higher correlation between the Religiosity Factor and all other variables. For boys, the Religiosity Factor had very high correlations with the Prosocial Values Factor, and significant correlations with all measures of social and personal adjustment. Compared to nonreligious boys, religious boys endorsed prosocial values more, were more satisfied with their families, had better school attitudes, were happier, and felt

better about themselves. Among girls, the Religiosity Factor had the only significant correlations with Prosocial Values and Life Satisfaction.

There were few other gender differences in correlations, except that for girls **Family Satisfaction** was more highly correlated with School Attitudes, Self Esteem, and Life Satisfaction. Compared to boys, it seems to be more important for girls to be satisfied with their families, if they want to achieve good social and personal adjustment.

Comment: Religious commitment seemed to function as a greater **asset for boys** than for girls. The results from **Mennonite** students supported this interpretation, but the trend was weaker. Compared to girls, the Mennonite boys' correlations of the Religiosity Factor with Prosocial Values, Family Satisfaction, and School Attitudes was greater; however the correlations between Religiosity and personal-adjustment variables tended to be equal to those of girls and insignificant.

3.7. Structural-Equations Modelling

The correlational analyses in the previous sections, indicated the fruitfulness of Structural-Equation Modelling. See Section 2.3. for an introduction to Structural Equation Modelling. This analysis tends to give a more conclusive picture about the role of religious commitment in the lives of adolescents than any other analyses. A specific model about the effects of variables on each other are proposed and the data are analyzed to determine as to whether they fit the proposed model.

In the **proposed model**, Family Religion promotes Religiosity in adolescents, then Religiosity promotes Prosocial Values, Prosocial Values promotes Social Adjustment (Family Satisfaction and School Attitudes), and Social Adjustment promotes Personal Adjustment (Self Esteem and Life Satisfaction). The model proposed two other direct influences: (1) Religiosity has some direct effect on Social Adjustment. (2) Prosocial Values has some direct effect on Personal Adjustment (see the figure below). The significant correlation between Religiosity and Social Adjustment is broken down into two components: (1) a direct influence of Religiosity on Social Adjustment and (2) an indirect effect where Religiosity promotes Prosocial Values and Prosocial Values promote Social Adjustment. Similarly, the significant correlation between Prosocial Values and Personal Adjustment is broken down into two components: (1) a direct effect of Prosocial Values on Personal Adjustment and (2) an indirect effect where Prosocial Values promotes Social Adjustment and Social Adjustment promotes Personal Adjustment. In order to obtain sufficient measured variables to calculate some latent variables, some scales were subdivided into parts: (1) Family Religion into FAMREL1 and FAMREL2; (2) School Attitudes into SAM1, SAM2, and

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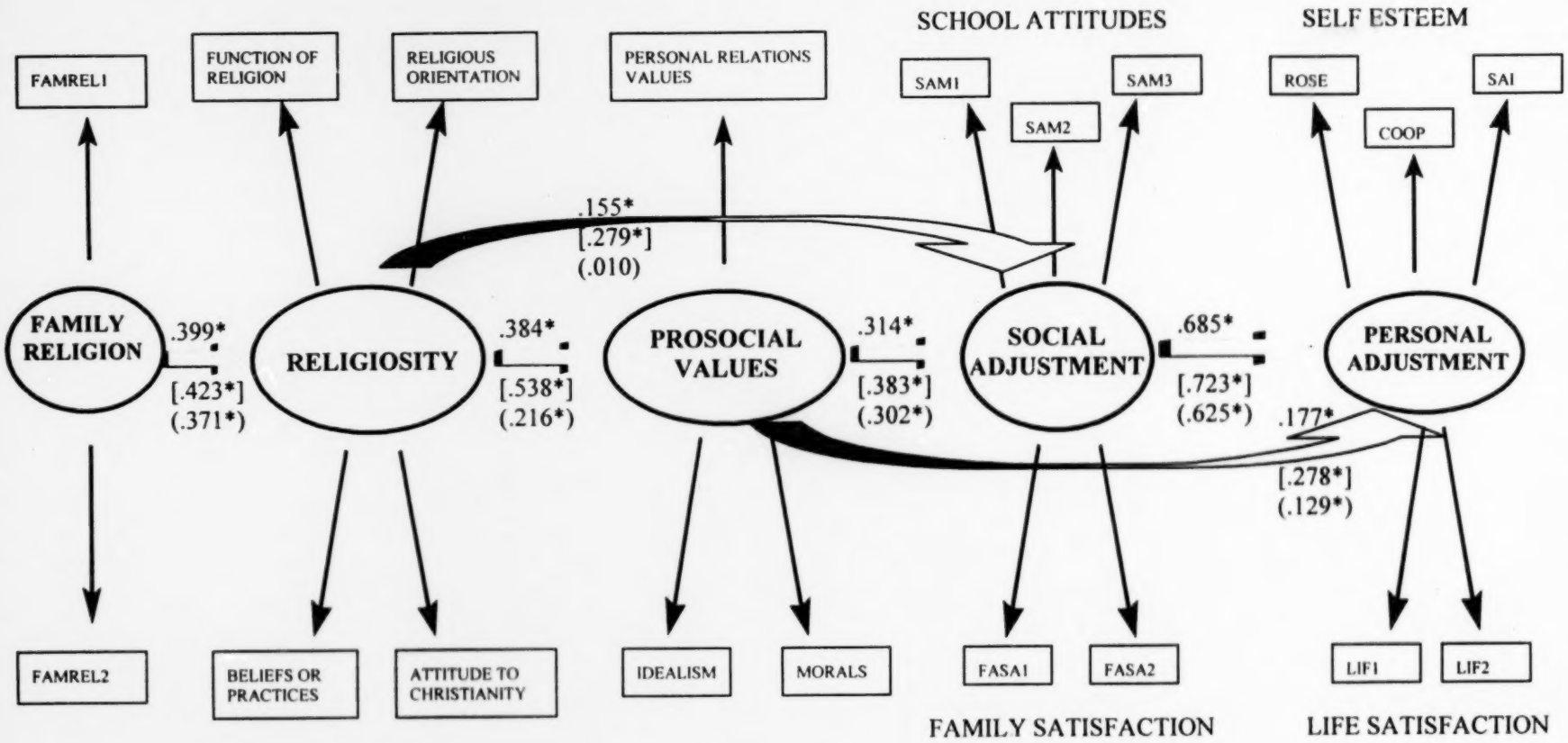
SAM3; (3) Family Satisfaction into FASA1 and FASA2; Life Satisfaction into LIF1 and LIF2. Thus FAMREL1 and FAMREL2 defined Family Satisfaction; Function of Religion, Religious Orientation, Beliefs and Practices, and Attitude to Christianity defined Religiosity; Personal Relations Values, Idealism, and Morals defined Prosocial Values; SAM1, SAM2, SAM3, FASA1 and FASA2 defined Social Adjustment; Rosenberg's SES, Coopersmith's SEI, and the Self-Activity Inventory, LIF1 and LIF2 defined Personal Adjustment.

The model was tested with **three samples**: the 741 students of the Total Sample; the 369 boys; and the 372 girls. The specific **statistical method** used was a LISREL program run by Proc. Calis.SAS (1994), version 6. In the diagram, measured variables are represented by rectangular boxes, and latent variables by ellipses. The Structural-Equation analyses involved the calculation of the overall model, the calculation of indicators of goodness of fit between the proposed model and the data, and breaking down the correlations between variables into direct effects and indirect effects, and the calculation of the level of significance of the direct effects. The diagram below records only the direct effects.



* direct effect significant at $p < .0001$

Total sample:	χ^2 / df = 1.534;	Goodness of fit indices:	GFI = .9975; NFI = .9946
[Boys]	: χ^2 / df = 0.194;		GFI = .9991; NFI = .9988
(Girls)	: χ^2 / df = 1.192;		GFI = .9962; NFI = .9913

For all three samples (i.e., Total Sample, boys, girls), the data fit the proposed model very well. According to the most stringent criterion for a **good fit**, i.e., χ^2/(degrees of freedom) < 2.0, the values of this index were as follows: boys = 0.194, girls = 1.19, Total Sample = 1.53. The data of the boys fitted the model even better than did those of the girls. Additional criteria for goodness of fit are the GFI (Goodness of Fit Index) and NFI (Normed Fit Index) > .90. For the three samples, the values of the GFI were .998 (boys), .996 (girls), .998 (Total Sample); the corresponding values of the NFI were .999 (boys), .991 (girls), .995 (Total Sample). The investigators did try out many alternatives to the above model by adding or deleting paths, but none of the alternative models met the goodness-of-fit criteria. Thus the above model was the only one which fitted the data.

The above path diagram also shows the **path coefficients** of the direct effects of the latent variables. An asterisk or * indicates which direct effects were significant at $p < .0001$. In general, the direct effects of boys had larger path coefficients than those of girls. The major differences between the path coefficients of boys and girls was that Religiosity had a significant direct effect on Social Adjustment for boys, but there was no significant direct effect of Religiosity on the Social Adjustment for girls. For boys, the correlation between Religiosity and Social Adjustment had two components: (1) a direct effect where Religiosity directly enhanced Social Adjustment and (2) an indirect effect where Religiosity fostered Prosocial Values and where Prosocial Values then promoted Social Adjustment. For girls, the correlation between Religiosity and Social Adjustment reflected the indirect effect mediated by Prosocial Values. The data indicated that religious commitment (or the lack of it) affected the lives of boys more than it did the lives of girls.

Comment: The Structural-Equation analyses provided strong and direct support for the **social facilitation** function of religious commitment in the lives of adolescents (e.g., Carver and Thomas, 1990). The role of religious commitment is not confined to behavior control, but religious commitment enhances social and personal adjustment by promoting prosocial values.

3.8. Summary of the Results

The major findings of the Catholic Schools Study can be summarized as follows:

(1) Most students were moderately, rather than highly **religious**; they tended to have favorable attitudes to their religion, but experienced some difficulty in applying their faith to their daily lives.

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(2) The students showed a very high endorsement of **prosocial values**; the endorsement was greatest for not hurting others and was least for making sacrifices for persons one did not know personally (i.e., idealism).

(3) The students had very good **school attitudes**; they took their education very seriously.

(4) The students tended to be well, but not highly, satisfied with their **families**, **themselves**, and their **lives**.

(5) There were **no significant gender differences** in religiosity, school attitudes, family satisfaction, self esteem, and life satisfaction.

(6) There were highly significant gender differences in **prosocial values**; girls endorsed prosocial values much more than did boys.

(7) **Religiosity** had a strong direct effect in promoting **prosocial values**.

(8) **Prosocial values** was predictive of **social adjustment** and to a lesser extent of personal adjustment.

(9) **Social adjustment** was highly predictive of **personal adjustment**.

(10) Compared to girls' religiosity, the **boys'** religiosity was more predictive of the endorsement of prosocial values, social adjustment and personal adjustment. The boys' religious commitment exerted stronger influences and influenced more areas of their lives.

(11) The data strongly supported a **social facilitation** model of the role of religiosity in the lives of adolescents: religiosity fostered the endorsement of prosocial values, prosocial values enhanced social adjustment, and good social adjustment contributed to good personal adjustment.

4. THE IMPLICATIONS FOR THE RELIGIOUS EDUCATOR

4.1. Effects of Religious Commitment

As has been discussed before (see Sections 1.1. and 1.2.), many educators, social scientists, and psychologists, believe strongly that commitment to the Christian religion has **harmful effects** on the social and personal adjustment of adolescents. Needless to say, persons who hold these opinions do not favor public financial support for religious schools. When challenged, these persons tend to argue that they do not know of any good evidence that Christian commitment has any beneficial effects. There are others (mostly researchers on adolescent

development), who claim that religious commitment discourages antisocial behavior and also promotes prosocial values and good social adjustment.

The present study has explored this issue from an empirical perspective. It found a strong and positive relation between Christian commitment and the endorsement of **prosocial values**. Such a relation was also found in studies of Mennonite high-school students and university students. The relation was especially strong for those prosocial values which involve some personal cost, but have the widest range of benefits for others (e.g., idealism, generosity, compassion). Even though the correlations between religiosity and indicators of social and personal **adjustment** were not always significant, they were always positive, never negative. The good effects of religious commitment may not always be strong enough to make a difference, but the present study provided no evidence that students were harmed by their Christian commitment. The present study provides spokespersons for Catholic education in public debates with some hard evidence that religious commitment is beneficial, not harmful. The present study extends the evidence about the values of religious education discussed in section 1.2.

Even though many persons think that as persons become more educated, their religious commitment will decline, the present study indicated a consistent and strong positive correlation between religious commitment and good **school attitudes**. At least in Catholic schools, religious commitment and educational commitment are allies, not enemies. This relation between religiosity and school attitudes makes it a realistic goal for Catholic schools to develop a core of lay persons who combine high levels of religious commitment and education. The Catholic Church will probably need many such persons in the future.

4.2. Religious Education

The present study indicated that most students tended to be moderately, rather than highly **religious**. They tended to have a consensus about the good effects of religion, but religion was not an important part of their daily lives. The students' families showed a wide range of religious involvement, from very low to very high. The study indicated that religious educators may face the challenge to help students to utilize the resources of their faith (e.g., Christian understanding of reality, prayer, Scripture reading, private and public worship, religious counselling) to cope with the problems of daily living. More explicit instruction in **religious coping** may be helpful here. Pargament (1997) provides a helpful overview of effective and ineffective religious coping. The Christian faith provides many resources which help adolescents to master their developmental tasks, but these resources have to be utilized. Case histories about persons who had used the resources of their faith in

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overcoming obstacles and discussion among students about religious coping, can be expected to help students to develop better religious coping skills. Moreover, when the Christian faith is presented as a resource for effective living, the faith may also become more attractive to nonreligious students.

4.3. Transmitting Prosocial Values

The present study indicated that most Catholic-schools students had a high commitment to **prosocial values**. Moreover, the more-religious students tended to value prosocial values more highly. See Schludermann (1988) for suggestions as to how religious schools can help their students to perceive the connections between their faith and prosocial values. The relation between religiosity and prosocial values has to be seen in a broader **social context**. According to recent surveys (e.g., Bibby and Posterski, 1992, pp. 13-30), the endorsement of prosocial values is declining among Canadian adolescents and adults. Moreover, broad social and economic trends indicate a greater need for voluntary organization (e.g., churches) motivated by prosocial values. Social problems can be expected to increase in the future: e.g., unemployment, family problems, homeless teenagers, marginalization of minority groups (especially aboriginal people). There is decreasing political support for financing government services for the poor and helpless. The government expects voluntary organizations, especially **churches**, to assume increasing responsibility for dealing with these social problems. For instance, in Toronto, most of the sheltering and care of homeless teenagers is now provided by the Catholic Covenant House and the Evangelical Evergreen Place. Churches will not be able to face these future responsibilities unless they have many members with high generosity and compassion.

Many humanists argue that one can have prosocial values **without religious commitment**. They argue that schools should teach prosocial values without religion. For instance, in several European countries (e.g., Austria) there is a campaign to replace Catholic religion classes in public schools with ethics classes. There are some **problems** with this approach. As Rokeach (1973) has pointed out, all persons endorse all values (including the prosocial ones), but to a different extent. It is therefore not difficult to convince students that, in the abstract, prosocial values, such as, generosity, compassion, honesty, forgiveness are desirable. However, acting on such prosocial values does not give any immediate benefits to the individual and may compete with values related to the individual's self interest (e.g., success, excitement, comfortable life, freedom). The problem is not to help the adolescent to know what is good, but motivating the adolescent to do the good, even if there is a personal cost involved. The Christian faith provides a consistent rationale, for making

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sacrifices for others whom one does not know. The high and consistent correlations between religious commitment and idealism, among Catholic, Mennonite and university students seems to indicate that the Christian faith has been more successful in providing such a rationale than have nonreligious ideologies.

The religious educator faces the problem that those prosocial values which involve some **personal cost** (e.g., idealism, generosity, compassion) have the lowest endorsement among the students (and the population in general). It is also these values which tend to have high correlations with religious commitment. The religious educator faces the task of **promoting values** which are important for the mission of the church, but which are relatively unpopular with adolescents. There are several procedures which can be expected to promote idealistic values: requiring students to do volunteer work for Catholic charities which deal with needy persons; sensitizing students to social needs by presenting case histories of persons in need; asking spokespersons of Catholic charities to come to school to explain how their faith motivated the work that they are doing; explaining to students that helping persons in need is not a disagreeable chore, but can be emotionally satisfying.

4.4. Enhancing Social and Personal Adjustment

Blum and Rinehart (1997, p. 21-24) provided evidence that schools have a strong potential to enhance students' well being. The critical school-related variable is **school connectedness**: "What seems to matter most for adolescent health is that schools foster an atmosphere in which students feel fairly treated, close to each other, and a part of a school" (p.24). Compared to others, students who feel connected to their school, have higher scores on all indicators of well being and engage in fewer problem behaviors. There are several things schools can do to make their students feel connected. One of these is the explicit teaching and practice of prosocial values (generosity, compassion, forgiveness) which communicate to students that they are in a community which cares for them. It is also important to communicate to students that these prosocial values are rooted in the Christian faith. On the negative side, schools which foster intense competition are not likely to make students feel connected. It is best to encourage students to make the best of their potentials whatever their potentials may be.

The present study indicated that students tended to be moderately, rather than highly satisfied with their **families**. That moderate satisfaction may have several reasons: adolescents may want to become more independent from parents, they may compete with their siblings, they may have conflicts with their family members, the family may be under stress because of economic problems etc. The religious school is usually not able to change family life, but it can help adolescents to cope more effectively with family problems. One way is to encourage

adolescents improve family relations by expressing prosocial values, such as forgiveness, compassion, generosity, and honesty. The strong correlation between prosocial values and family satisfaction indicates the fruitfulness of such an approach. Another is to teach adolescents to use religious coping strategies when dealing with serious family problems (e.g., having parents with drinking problems).

The present study indicated that religiosity is more closely correlated to social adjustment than to **personal adjustment**. Typically the correlations between religiosity and personal-adjustment variables were positive, but too weak to be significant. Religiosity had higher correlations with life satisfaction than with self esteem. The data of this study did not agree with the view that religious commitment is associated with personal inadequacy (e.g., Dittes, 1969, pp. 637-641). The problem of religious commitment and personal adjustment is not that religious commitment is harmful, but that religious commitment may be inconsequential. The data from this study did show that religious commitment has the potential to be predictive of good personal adjustment. Among Catholic boys, religious commitment had significant positive correlations with both self esteem and life satisfaction. According to the Structural-Equation analyses, these correlations represented indirect effects mediated via prosocial values. The trends that religiosity tended to be more strongly related to social adjustment than to personal adjustment, suggests that adolescents find it easier to perceive the relevance of religious teachings and prosocial values to social relations than to more personal problems.

The Christian faith does have some **resources** to enhance personal adjustment. **Life satisfaction** depends on the adolescent's values and goals. Adolescents who strive after unrealistic or dysfunctional goals tend to be dissatisfied with their lives. Christian educators can help adolescents to clarify and choose their goals wisely. It may be ultimately more satisfying to help other people than to maximize self advancement. In a similar way, Christian educators can communicate to adolescents the true basis of **self worth**. In secular society, adolescents derive their self esteem from approval of their peers, to a lesser extent by approval of their family members. Unfortunately, adolescents compete for peer approval on the basis of looks, skills, possessions and other assets. In such a competition, there are few winners and many losers. Moreover, in such a competition, adolescents are more likely to run each other down rather than to affirm each other. The religious educator can communicate to the adolescent that even when he/she is not good looking, not very skilled and not very rich, he/she still has value because God loves him/her and died for him/her. Even when peers do not care for the adolescent, God does care. Another way of enhancing personal adjustment is to teach the adolescent effective religious coping.

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